UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,341	02/12/2002	Jeffrey W. Liebert	4090-138	5700

7590 05/12/2004

Woodard, Emhardt, Naughton, Moriarty and McNett
Bank One Center/Tower
111 Monument Circle, Suite 3700
Indianapolis, IN 46204-5137

EXAMINER	
RIVELL, JOHN A	

ART UNIT	PAPER NUMBER
3753	

DATE MAILED: 05/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/074,341	LIEBERT, JEFFREY W.	
	Examiner	Art Unit	
	John Rivell	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/13/04 (amendment & drawing/fig. 6)*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-14 and 16-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *8,9,16-18 and 25-30* is/are allowed.

6)☒ Claim(s) *2-6,10,12-15 and 19-24* is/are rejected.

7)☒ Claim(s) *7 and 11* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ ~~Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)~~ Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claims 1 and 15 have been canceled. Claims 2-14 and 16-30 remain pending.

Applicant's arguments, see the "REMARKS" section, pages 12-13 of the response filed February 13, 2004, with respect to claims 11 and 30 have been fully considered and are persuasive. The objection of claims 11 and 30 has been withdrawn.

Applicant's remaining arguments filed February 13, 2004 have been fully considered but they are not persuasive.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2-5, 10, 12, 13 and 14 are rejected under 35 U.S.C. §102 (b) as being anticipated by Tsiguloff.

The patent to Tsiguloff discloses, in figures 2 and 3 for example, "a safety shut-off valve, comprising: a valve housing (including elements 31, 43); a detachable end portion (the section of body 43 above V-notch 107 and including the outlet connecting flange 53) connected to said valve housing by a region of reduced strength (V-notch 107); a valve element (61) disposed within said valve housing (31, 43) and being displaceable between an open position (fig. 2) that permits flow through the valve and a closed position (fig. 3) that substantially prevents flow through the valve; a biasing element (spring 69) engaged with said valve element (61) to urge said valve element toward said closed position (fig. 3); and a retainer element (including all "pawls" 101, collar 95 and support 79) disposed within said valve housing (31, 43) and including a

plurality of arm segments (pawls 101) engaged against said detachable end portion (the portion above V-notch 107) adjacent said region of reduced strength (at V-notch 107) to initially maintain said valve element (61) in said open position (fig. 2); and wherein imposition of a force onto said detachable end portion results in at least partial detachment from said valve housing along said region of reduced strength (as disclosed specifically at column 3, lines 12-25, the detachable end will "shift laterally, lift, twist or move with some combinations...". This is read as encompassing "partial detachment". Further "when any pawl is rotated" signifies the potential for only one pawl to move to release the valve. This "pawl" would be released by partial detachment), said at least partial detachment causing at least one of said plurality of arm segments (101) to disengage said detachable end portion (above V-notch 107) to permit said biasing element (69) to displace said valve element (61) toward said closed position" as disclosed at column 2, line 50 through column 3, line 30 and as claimed in instant claim 2.

Regarding claim 3, in Tsiguloff, "said detachable end portion (above V-notch 107) includes a shoulder (at 109) extending about an inner periphery adjacent said region of reduced strength (107), said plurality of arm segments (101) abutting said shoulder (surface 105 to surface 109) to initially maintain said valve element in said open position (fig. 2.), said at least partial detachment causing at least one of said plurality of arm segments to disengage said shoulder to permit said biasing element to displace said valve element toward said closed position" as claimed and as shown in fig. 3.

Regarding claim 4, in Tsiguloff, "said shoulder (109) extends entirely about said inner periphery to define an annular shoulder" as claimed.

Regarding claim 5, in Tsiguloff, "said retainer element includes at least three of said arm segments (there are three pawls 101 disclosed) positioned uniformly about said inner periphery" as claimed.

Regarding claim 10, in Tsiguloff, "said at least partial detachment of said detachable end portion results from said valve housing is caused by fracturing along said region of reduced strength (107)" as claimed.

Regarding claim 12, in Tsiguloff, "said region of reduced strength (107) is formed by a groove extending about an outer periphery of said detachable end portion" as claimed.

Regarding claim 13, in Tsiguloff, "said region of reduced strength is formed by a narrowed wall thickness" as claimed.

Regarding claim 14, in Tsiguloff, "said retainer element (the outline of the pawls 101 and collar) has a cup-like configuration" as claimed.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsiguloff.

Tsiguloff discloses the claimed invention except for "four of said arm segments".

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ an additional arm segment with the disclosed three

pawls 101, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8. Moreover, the use of four pawls 101 would provide for a more stable, uniformly supported collar 95 in that, rather than having only three equidistantly spaced pawls, the use of four pawls would provide an additional support and more evenly spread the support function among the pawls as compared to the three used in Tsiguloff.

Claims 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsiguloff in view of Brinkley et al.

The patent to Tsiguloff discloses all the claimed features with the exception of having "a valve element sized and shaped to be guidingly displaced by (the) inner periphery" of the fluid conducting passage. Rather, valve 61 includes a guide stem 59 and guide 57 to guide the valve movement.

The patent to Brinkley et al. discloses, at figures 8 and 9, that it is known in the art to employ a bore wall guided valve element at spool 60b, guided within the bore within the housing section 30, which valve closes in response to partial detachment of the detachable portion 28 along fracture groove 52 (see fig. 9) for the purpose of eliminating valve parts, such as a separate guide piece and valve stem as compared to that shown in Tsiguloff.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Tsiguloff a valve element sized and shaped to be guided within an axial bore in which the valve reciprocates for the purpose of eliminating the total number of valve parts such as a separate guide element and valve stem as recognized by Brinkley et al.

Regarding claim 19, a "lateral opening" is disclosed in the spring retainer/valve housing at reference arrow 56b which communicates with port 102 in the spool 60b.

Regarding claim 20, Brinkley et al. discloses "a portion of the valve adjacent said region of reduced strength (52) defines external threads (at 32) engagable with a corresponding threaded opening in a tank wall (20) with said region of reduced strength positioned adjacent an exterior surface of said tank wall.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ the device of Tsiguloff as a valve device threaded into a threaded wall of a tank for the purpose of controlling fluid flow from the tank as recognized by Brinkley et al.

Regarding claim 21, on the exterior surface of the device of Brinkley et al. there is believed to be inherently at least "two flat" sections enabling tightening with a wrench as claimed.

Regarding claim 22, to make the outer shape of the surface of the device of Tsiguloff, as modified by Brinkley et al., a "hexagonal shape" is considered to be an obvious design expedient not solving any stated problem not providing new and unexpected results. Additionally, to do so would have been obvious to one of ordinary skill in the art to accommodate multiple wrench positions.

Regarding claim 23, Tsiguloff discloses "said retainer element includes a plurality of arm segments (pawls 101) engaged against said detachable end portion adjacent said region of reduced strength (107) to initially maintain said valve element (61) in said open position (fig. 2), said at least partial detachment causing at least one of said plurality of arm segments to disengage said detachable end portion to permit said biasing element to displace said valve element toward said closed position" as claimed.

Regarding claim 24, Tsiguloff discloses that "said detachable end portion includes a shoulder (109) extending about an inner periphery thereof adjacent said region of reduced strength (107), said plurality of arm segments (101) abutting said shoulder (surface 105 abutting surface 109) to initially maintain said valve element in said open position (fig. 2), said at least partial detachment causing at least one of said plurality of arm segments to disengage said shoulder to permit said biasing element to displace said valve element toward said closed position" as claimed.

Response to Arguments

In response to applicants' remarks concerning Tsiguloff, the argument that the claims are not anticipated by Tsiguloff by reason that the pawls 101 of Tsiguloff remain in engagement with the detachable upper portion, and are detachable from the collar 95 is not persuasive.

It is agreed with that the pawls detach or disengage from the collar 95 thus releasing the collar 95 to permit valve movement to the closed position as shown in fig. 3. However, prior to rupture of the conduit, the upper end of each pawl 101 is in "engagement" with the upper detachable end portion of the conduit. Each pawl end has a surface "formed at 105" (column 3, lines 5) that engages the inner cam surface 109 (column 3, line 20) of the upper detachable portion of the conduit. When these two surfaces are flat against each other, as in fig. 2, they are in "engagement". Upon at least partial rupture of the conduit, these two surfaces become disengaged as demonstrated in fig. 3. Although these two elements, the upper end of the pawls 101 105 and the inner surface of the upper detachable portion, may abut each other and/or

otherwise be in contact with each other, they are certainly disengaged from each other to the extent that "at least one of said plurality of arm segments (at face 105 disengages from) said shoulder (shoulder 109) to permit said biasing element to displace said valve element toward said closed position" as recited in instant claim 3.

The further argument that "the closure mechanism disclosed in the '926 patent requires an increased number of parts, has an added degree of complexity, and is reliant upon the interaction of multiple parts to effect closure of the valve element 61" is agreed with. As compared to applicants' "simple, yet effective, structural and operational configuration" applicants' device "is clearly distinguishable from and patentable over the safety valve disclosed in the '926 patent" as demonstrated by the below noted allowable claim language. However, as compared to the above claim language, applicants' claimed device has no distinction from that illustrated in Tsiguloff.

Regarding applicant's further comments concerning claims 19-23, the above arguments are repeated. As such, the above responsive comment apply here as well.

Claims 8-9, 16-18 and 25-30 are allowed.

Claims 7 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (703) 308-2599. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on (703) 308-1272. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John Rivell
Primary Examiner
Art Unit 3753

j.r.